

Recovery Plan Action Status

Plan Name: Hualapai Mexican Vole

Plan Status: Final

Plan Date: 19-Aug-91

Lead Agency: USFWS

Lead Office: Arizona Ecological Services Field Office

(2602)

242-0210)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Hualapai Mexican vole (Microtus mexicanus hualpaiensis)	1	1	Protect occupied habitat	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Land Use	Labor type not yet selected	BLM has lead on their property
Hualapai Mexican vole (Microtus mexicanus hualpaiensis)	1	10	Active & Passive restoration techniques for habitat	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Other	Labor type not yet selected	
Hualapai Mexican vole (Microtus mexicanus hualpaiensis)	1	11	Management of habitats	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Land Use	Labor type not yet selected	BLM has lead on their property. Through numerous biological opinions and grazing permits, BLM has reduced impacts to vole habitat.
Hualapai Mexican vole (Microtus mexicanus hualpaiensis)	2	12	Improve range conditions	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Land Use	Labor type not yet selected	Through numerous biological opinions and grazing permits, BLM has reduced impacts to vole habitat.

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Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	1	13	Protect springs and seeps	Ongoing Current	FY 1995 - FY 1999		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Land Use	Labor type not yet selected	Existing vole habitat is closely associated with these water sources. As part of the Yellow Pine Allotment grazing permit one spring was fenced. On the Walnut Creek Allotment cattle access is limited to the Wabayuma spring due to steep terrain.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	14	Transplant	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Other	Labor type not yet selected	Implement as necessary. Unaware of any talks of transplants at this time.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	15	Educational program	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Other: Law Enforcement	Labor type not yet selected	Unaware of any educational programs that were started or are ongoing.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	16	People management needs	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Other: Information and Education	Labor type not yet selected	
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	17	Administrative protections	Not Started	Prior to FY 1995		Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Planning	Labor type not yet selected	BLM consulted on their resource management plan.

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Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	18	Management flexibility	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Work type not yet selected	Labor type not yet selected	Allow for updates to Recovery Plan to make use of newly developed information on the vole and its habitat. There have been no recovery plan updates. There is not a current recovery team.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	19	Range and taxonomy	Partially Complete	Prior to FY 1995	FY 2000 - FY 2004	Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque, Arizona State Land Department, Bureau of Indian Affairs (Hualapai Indian Reservation), Hualapai Tribe	Research: General	Labor type not yet selected	Arizona Game and Fish Department conducted field investigations on the distribution. The last report was June 1995. Additionally, numerous reports on the genetics of the species have occurred.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	2	Interagency cooperation	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Other	Labor type not yet selected	
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	20	Population dynamics, life history studies	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Work type not yet selected	Labor type not yet selected	Not initiate studies using Hualapai voles immediately, due to precariously low population levels. Surrogates may be used

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Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	21	Environmental requirements	Partially Complete	Prior to FY 1995	FY 2000 - FY 2004	Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Research: Habitat Requirements	Graduate Student	William D. Boyett published a thesis on the habitat relations of rodents in the Hualapai Mountains of Northwestern Arizona.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	22	Predation	Unknown			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Research: Predation	Labor type not yet selected	Unaware of any studies regarding predation of voles. However, AGFD petition to delist states that predation is not known to be a problem, especially since the range of the species is not limited to the Hualapai Mountains.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	23	Population biology	Partially Complete	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Research: Genetics	Labor type not yet selected	Research on the genetics of the species has occurred by Frey and Yates (1993 and 1995) and by Busch et al (2001).
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	24	Contingency plans	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Work type not yet selected	Labor type not yet selected	
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	25	Captive breeding	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Work type not yet selected	Labor type not yet selected	Implement as necessary. Currently no plans for captive breeding.

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Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	3	Administrative protection	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Planning	Labor type not yet selected	Numerous allotment management plans have been consulted on for effects to Hualapai mexican voles (Yellow Pine Allotment, Walnut Creek, La Cienega Allotment).
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	3	4	Law enforcement	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, U.S. Fish and Wildlife Service, Law Enforcement Division, Bureau Land Management , USFWS Regional Office 2 - Albuquerque	Other: Law Enforcement	Labor type not yet selected	Ongoing
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	1	5	Locate and protect potential habitats	Ongoing Current	Prior to FY 1995		Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Acquisition	Labor type not yet selected	06/09/1998 BLM consulted on a Hualapai Mountains Land Exchange may contain suitable or potentially suitable habitats for the vole.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	6	Research	Partially Complete	Prior to FY 1995	FY 2000 - FY 2004	Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Research	Labor type not yet selected	William D. Boyett published a thesis on the habitat relations of rodents in the Hualapai Mountains of Northwestern Arizona. Jennifer Frey's thesis on Morphologic variation in the mexican vole was finalized 03/13/1999. Arizona Game and Fish has performed numerous surveys.

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Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	7	Grazing impacts	Ongoing Current	Prior to FY 1995		Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Management: Land Use	Labor type not yet selected	Numerous allotment managment plans have been consulted on for effects to Hualapai mexican voles (Yellow Pine Allotment, Walnut Creek, La Cienega Allotment).
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	8	Watershed conditions	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Research	Labor type not yet selected	Unaware of any watershed condition research that has been started or that is planned for Hualapai Mexican vole habitat.
Hualapai Mexican vole (<i>Microtus mexicanus hualpaiensis</i>)	2	9	Vegetation studies	Not Started			Arizona Department of Game and Fish, Bureau Land Management , Fish and Wildlife Enhancement, USFWS Regional Office 2 - Albuquerque	Research	Labor type not yet selected	Unaware of any vegetation research that has been started or that is planned for Hualapai Mexican vole habitat.